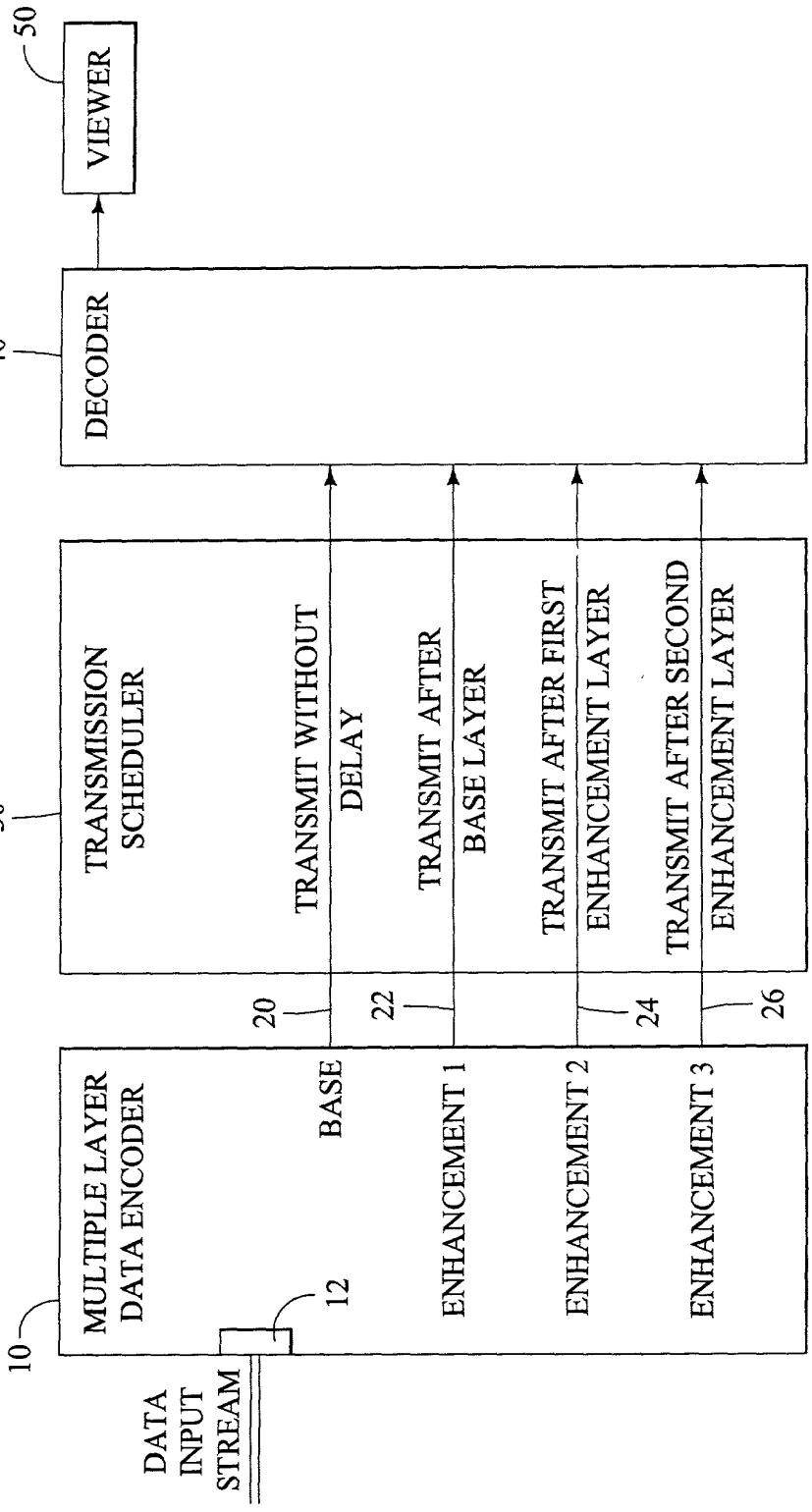
DATA INPUT STREAM
10
MULTIPLE LAYER DATA ENCODER
12
BASE
ENHANCEMENT 1
ENHANCEMENT 2
ENHANCEMENT 3
20
22
24
26
30
TRANSMISSION SCHEDULER
TRANSMIT WITHOUT DELAY
TRANSMIT AFTER BASE LAYER
TRANSMIT AFTER FIRST ENHANCEMENT LAYER
TRANSMIT AFTER SECOND ENHANCEMENT LAYER
40
DECODER
50
VIEWER

FIG. 1

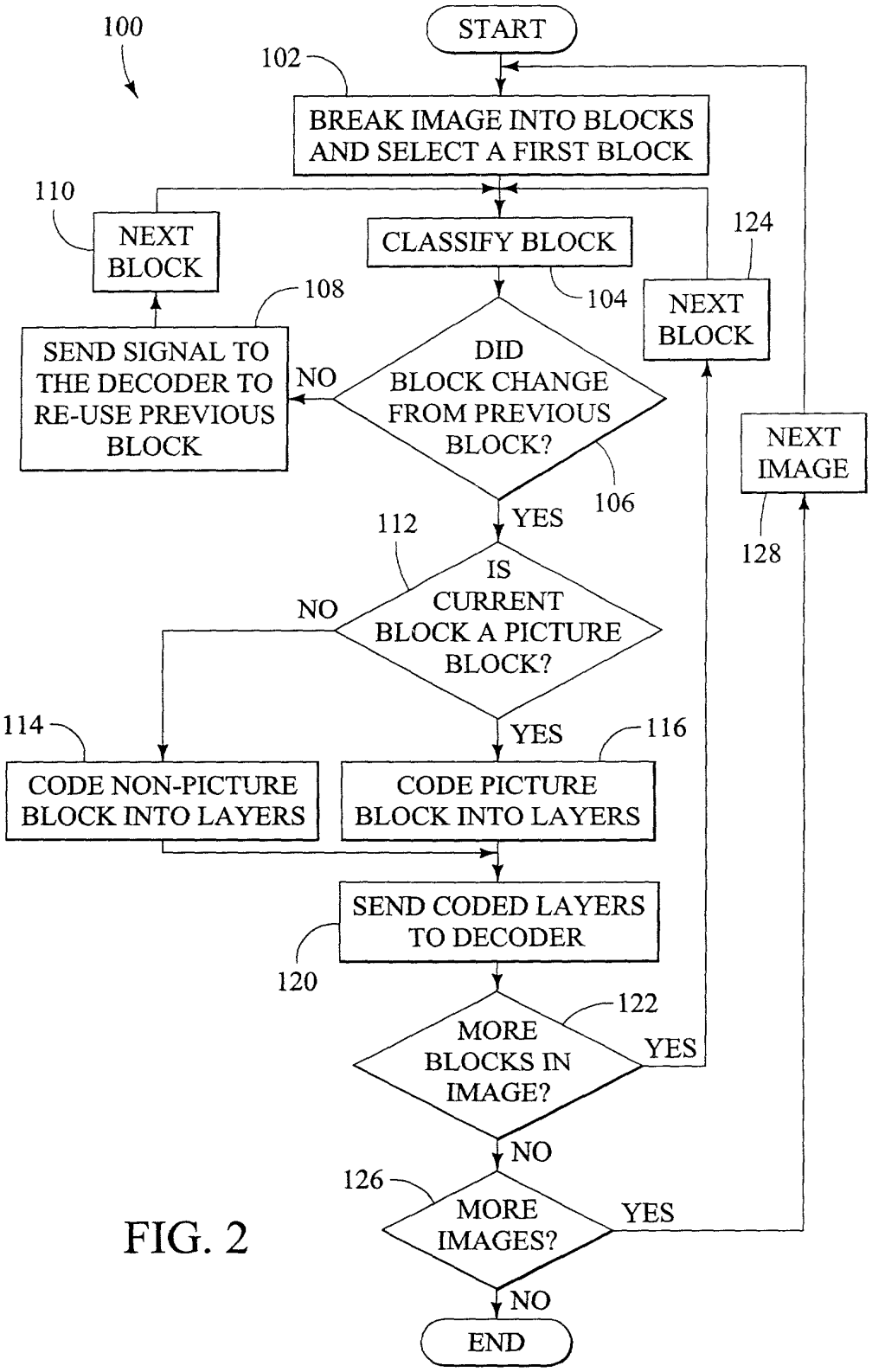
100
START
102
BREAK IMAGE INTO BLOCKS AND SELECT A FIRST BLOCK
110
NEXT BLOCK
CLASSIFY BLOCK
104
124
NEXT BLOCK
108
SEND SIGNAL TO THE DECODER TO RE-USE PREVIOUS BLOCK
NO
DID BLOCK CHANGE FROM PREVIOUS BLOCK?
106
NEXT IMAGE
128
YES
112
IS CURRENT BLOCK A PICTURE BLOCK?
NO
YES
114
116
CODE NON-PICTURE BLOCK INTO LAYERS
CODE PICTURE BLOCK INTO LAYERS
SEND CODED LAYERS TO DECODER
120
122
MORE BLOCKS IN IMAGE?
YES
NO
126
MORE IMAGES?
YES
NO
END

FIG. 2

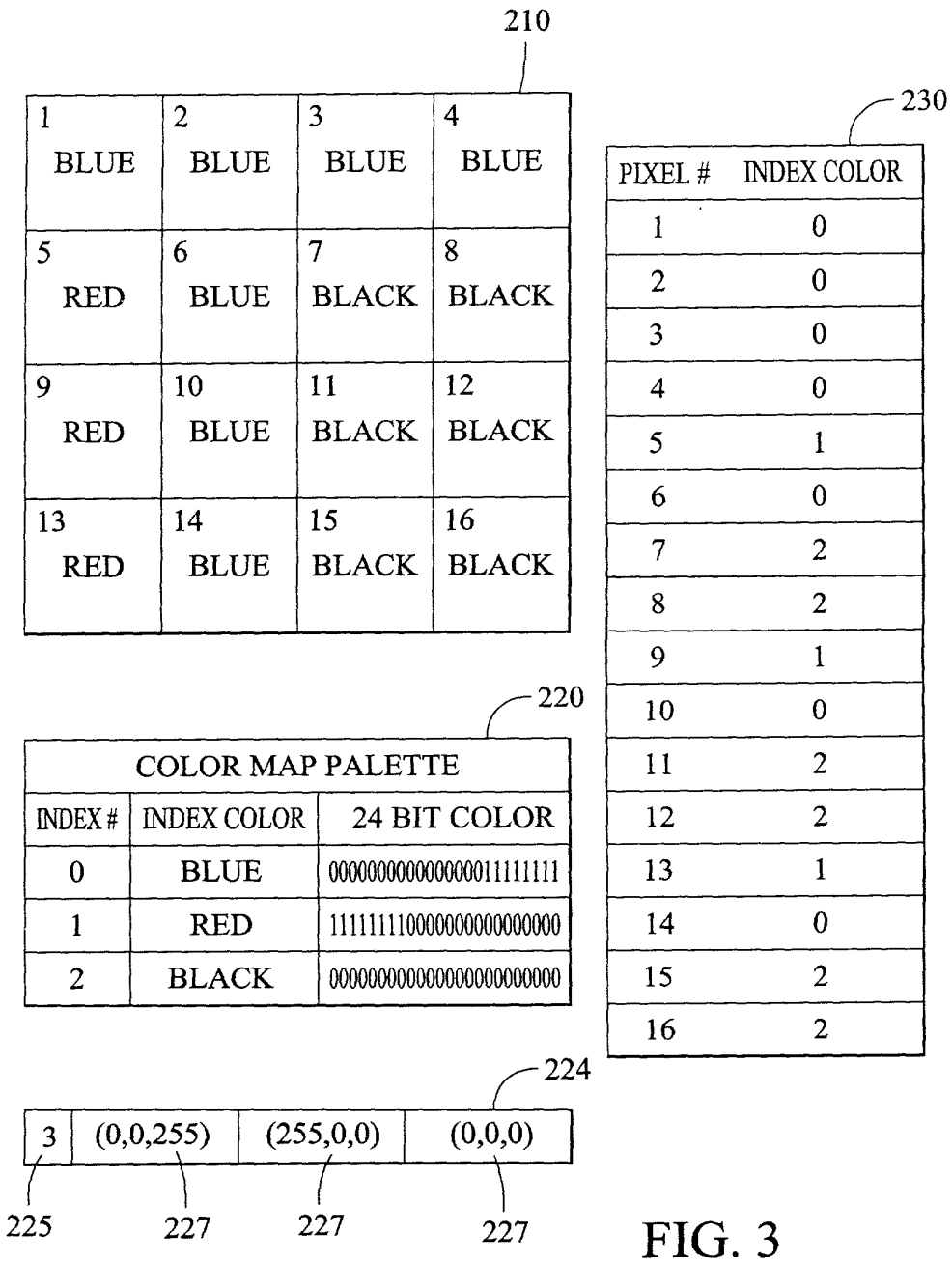
210
1 BLUE
2 BLUE
3 BLUE
4 BLUE
5 RED
6 BLUE
7 BLACK
8 BLACK
9 RED
10 BLUE
11 BLACK
12 BLACK
13 RED
14 BLUE
15 BLACK
16 BLACK
230
PIXEL # INDEX COLOR
1 0
2 0
3 0
4 0
5 1
6 0
7 2
8 2
9 1
10 0
11 2
12 2
13 1
14 0
15 2
16 2
220
COLOR MAP PALETTE
INDEX # INDEX COLOR 24 BIT COLOR
0 BLUE 000000000000000011111111
1 RED 111111110000000000000000
2 BLACK 000000000000000000000000
224
3 (0,0,255) (255,0,0) (0,0,0)
225
227
227
227

FIG. 3

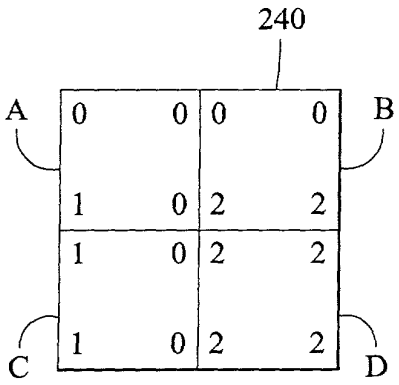

FIG. 4A

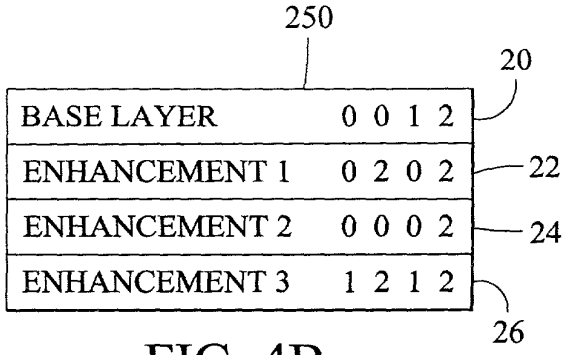

FIG. 4B

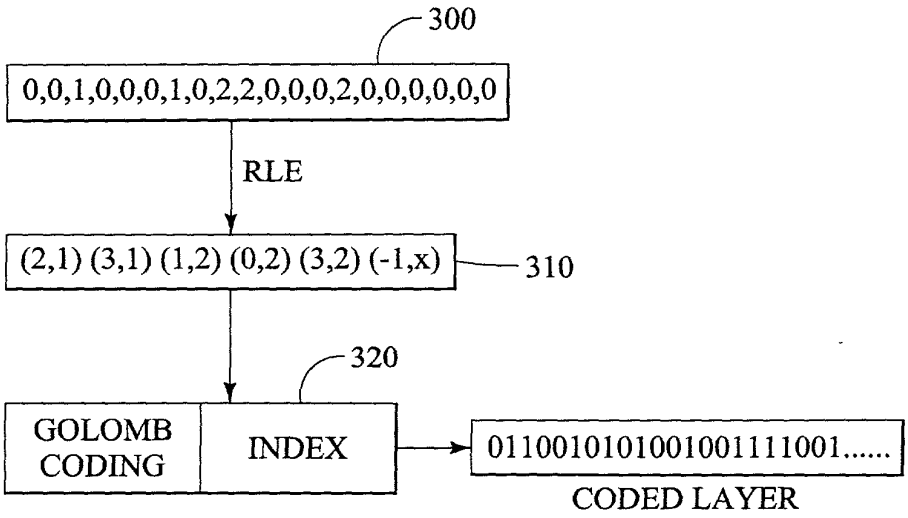

FIG. 5

100	99	16	201
100	99	14	80
100	14	80	151
100	80	72	69

410

FIG. 6

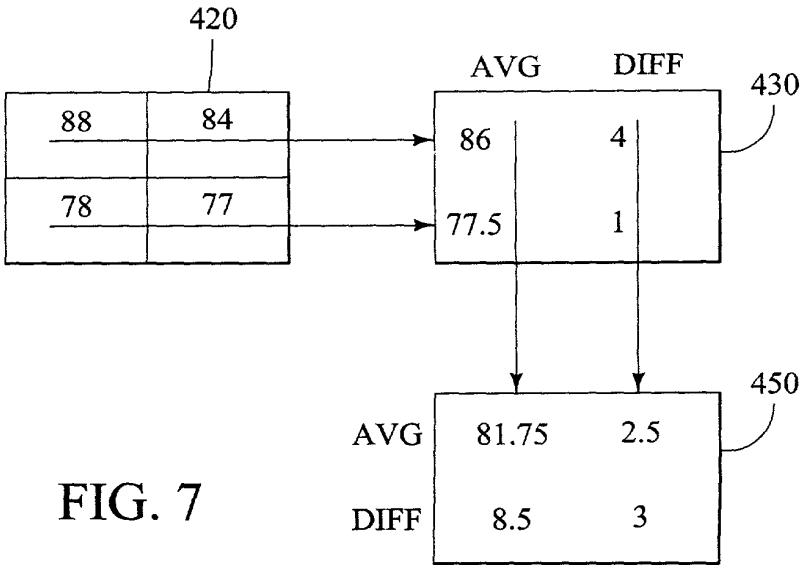

FIG. 7

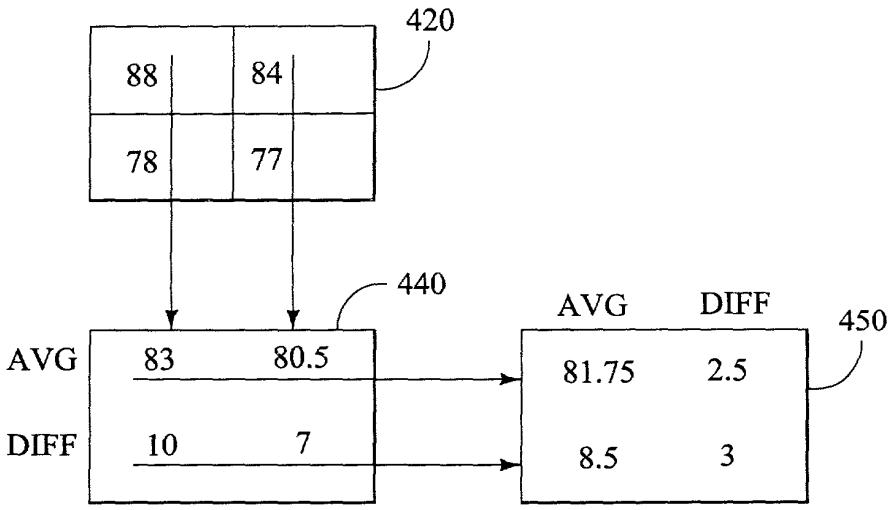

FIG. 8

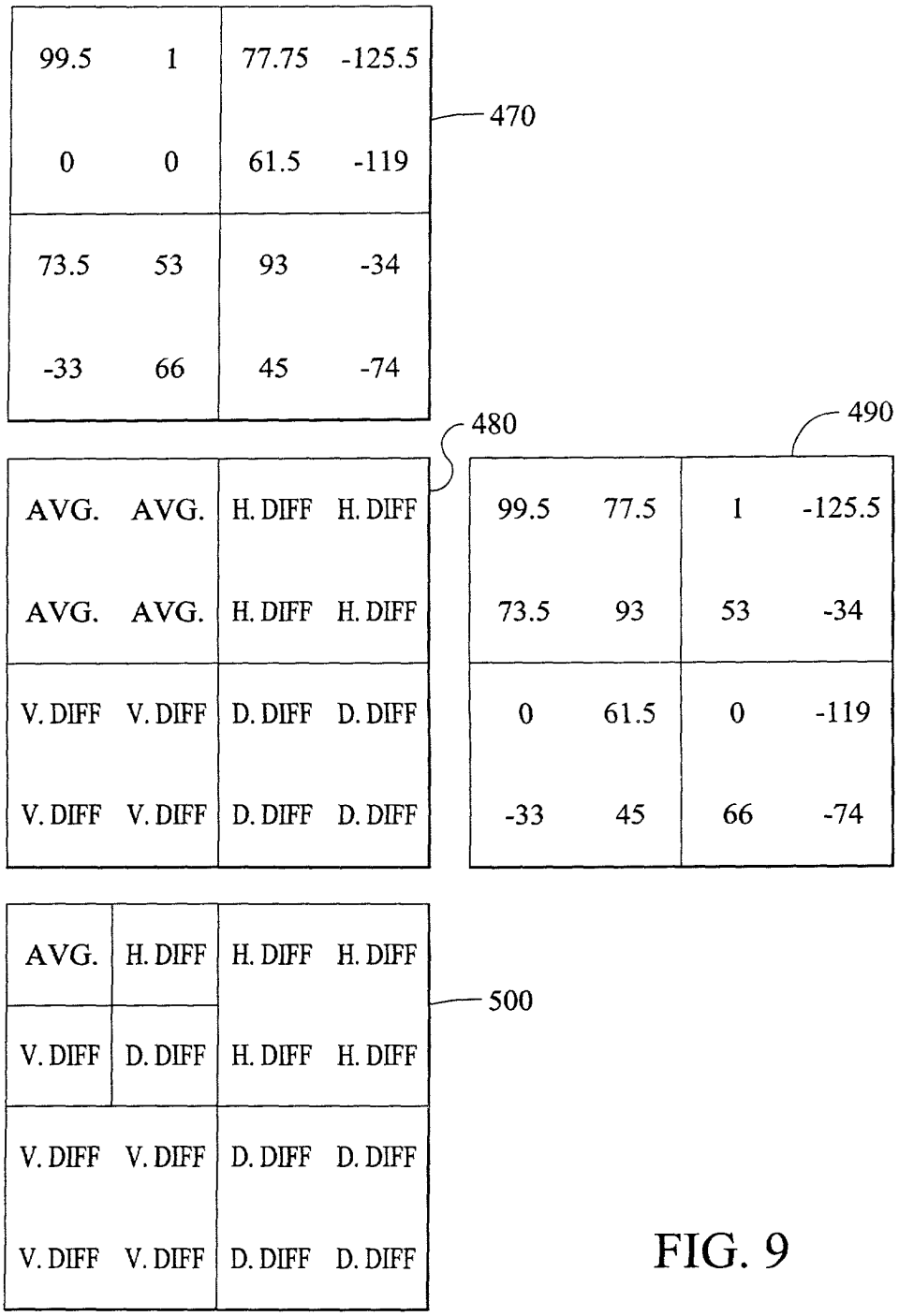
99.5
1
77.75
-125.5
0
0
61.5
-119
470
73.5
53
93
-34
-33
66
45
-74
480
490
AVG.
AVG.
H. DIFF
H. DIFF
AVG.
AVG.
H. DIFF
H. DIFF
V. DIFF
V. DIFF
D. DIFF
D. DIFF
V. DIFF
V. DIFF
D. DIFF
D. DIFF
99.5
77.5
1
-125.5
73.5
93
53
-34
0
61.5
0
-119
-33
45
66
-74
AVG.
H. DIFF
H. DIFF
H. DIFF
V. DIFF
D. DIFF
H. DIFF
H. DIFF
500
V. DIFF
V. DIFF
D. DIFF
D. DIFF
V. DIFF
V. DIFF
D. DIFF
D. DIFF

FIG. 9

85.9375	1.125	1	-125
5.375	41.25	53	-34
0	61.5	0	-119
-33	45	66	-74

520

FIG. 10

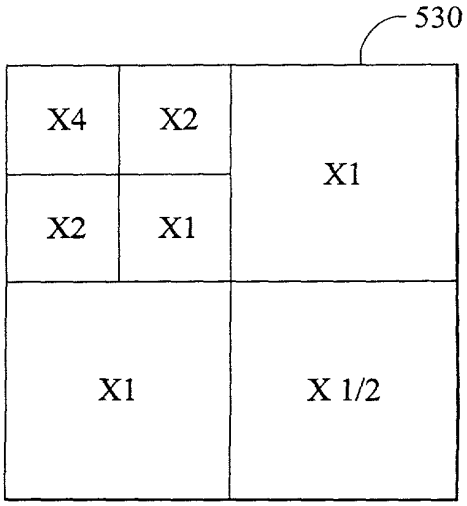

FIG. 11

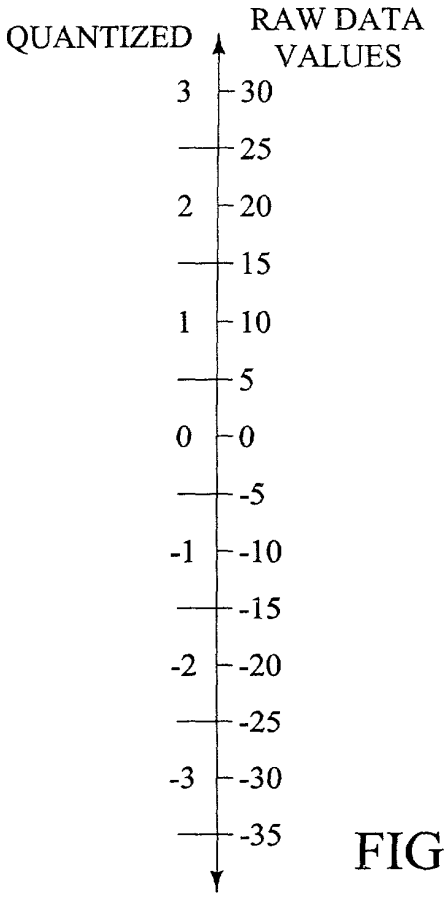
QUANTIZED
RAW DATA VALUES
3
30
25
2
20
15
1
10
5
0
0
-5
-1
-10
-15
-2
-20
-25
-3
-30
-35

FIG. 12

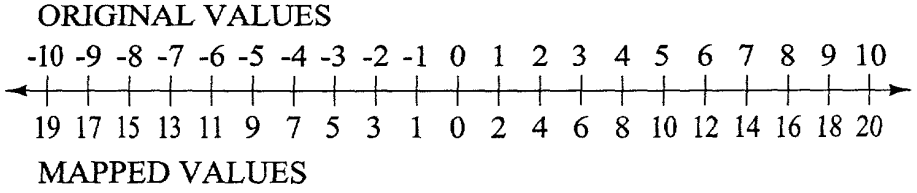
ORIGINAL VALUES
-10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10
19 17 15 13 11 9 7 5 3 1 0 2 4 6 8 10 12 14 16 18 20
MAPPED VALUES

FIG. 13

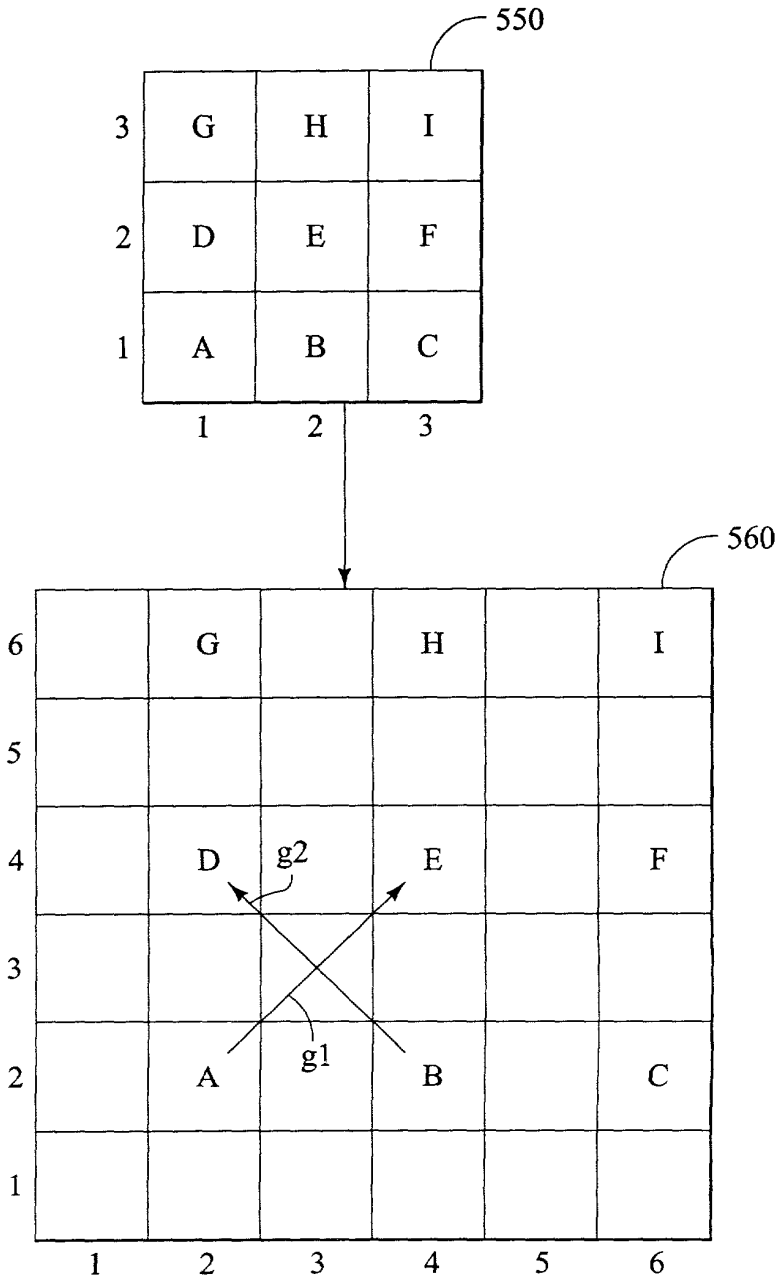

FIG. 14

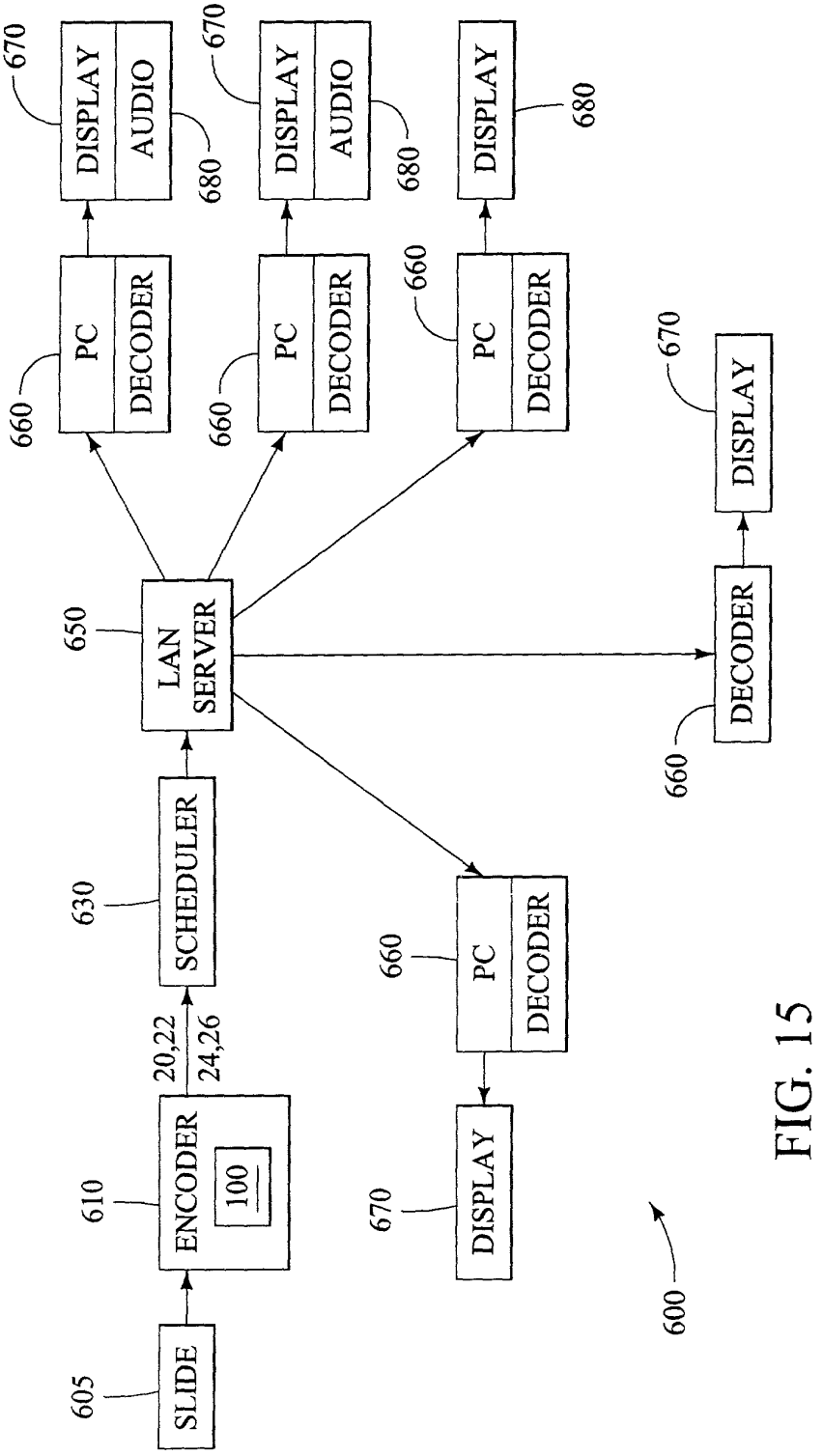
600
605
SLIDE
610
ENCODER
100
20,22
24,26
630
SCHEDULER
650
LAN SERVER
660
PC
DECODER
670
DISPLAY
680
AUDIO

FIG. 15